

Note: This amendment will replace the entire existing Chapter 2 - Beneficial Uses section of the Water Quality Control Plan for the North Coast Region (May 2011). All revisions are editorial (non-substantive) in nature. This is the "clean copy" of the amendment, deletions and additions to existing text are not indicated.

2. BENEFICIAL USES

2.1 INTRODUCTION

The mission of the Regional Water Board is to achieve the highest water quality consistent with the maximum benefit to the people of the state. Both aquatic ecosystems and groundwaters provide such benefits, and the beneficial uses of water described in this chapter define the resources, services, and qualities of the aquatic systems that characterize high water quality.

Beneficial uses of surface waters and groundwaters presented in this chapter form the foundation on which water quality objectives, discharge prohibitions, and other implementation actions are established.

The beneficial uses of water include not only the great variety of ways in which water benefits people and society but also the functions of water in maintaining the natural environment. The basis for the following discussion of beneficial uses is section 13050(f) of California's Porter-Cologne Water Quality Control Act, which states:

"Beneficial uses" of the waters of the state that may be protected against water quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

An essential part of the water quality planning process is an assessment of the beneficial uses that are to be identified and protected. Table 2-1 of this chapter identifies beneficial uses for each hydrologic area in the North Coast Region, as well as for specific waterbodies and broad categories of waters (i.e., bays, estuaries, minor coastal streams, ocean waters, wetlands, and groundwaters).

Protection will be afforded to existing and potential beneficial uses of waters of the North Coast Region. The federal antidegradation policy¹ requires that existing instream water uses and the level of water quality necessary to protect those uses be maintained and protected. It also states that existing uses are those uses actually attained in the waterbody on or after November 28, 1975, whether or not they are included in water quality standards.² Existing and potential beneficial uses of water in the North Coast Region are presented in Table 2-1.

¹ 40 CFR § 131.12(a)(1).

² 40 CFR § 131.3(e).

The beneficial uses of any specifically identified waterbody generally apply to all its tributaries. Also, a beneficial use is to be protected in any location that it is found, regardless of whether it is identified for a specific hydrologic unit in Table 2-1 of the Basin Plan.

Water quality standards are adopted to protect public health and welfare, to enhance the quality of the waters of the state, and to serve the purposes of the federal Clean Water Act.³ Water quality standards consist of:

- 1) Beneficial uses of water.
- 2) Water quality objectives to protect those beneficial uses.
- 3) Implementation of the federal and state policies for antidegradation.

Chapter 3 of the Basin Plan contains numeric and narrative water quality objectives, including the state Antidegradation Policy⁴, designed to ensure that all beneficial uses of water in the North Coast Region are maintained and protected.

Chapter 4 contains the implementation program intended to meet water quality objectives and protect beneficial uses.

Chapter 5 describes the North Coast Region and statewide monitoring and surveillance methods used to measure achievement of the water quality objectives and the ultimate protection of beneficial uses of water.

2.2 BENEFICIAL USE DEFINITIONS

In 1972, the State Water Board adopted a uniform list of beneficial uses, including definitions, to be applied throughout all basins of the State. This list was updated in 1996. In addition to the beneficial uses identified on the 1996 statewide list, five additional beneficial uses have been identified in the North Coast Region.

- Wetland Habitat (WET).
- Water Quality Enhancement (WQE).
- Flood Peak Attenuation/ Flood Water Storage (FLD).
- Native American Cultural Use (CUL).
- Subsistence Fishing (FISH).

The beneficial uses of water defined below are identified within the North Coast Region. Beneficial uses are presented alphabetically by commonly used abbreviation.

³ Clean Water Act § 101(a)(2) and § 303(c).

⁴ State Water Board Resolution 68-16.

2.2.1 AGR - Agricultural Supply

Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

2.2.2 AQUA - Aquaculture

Uses of water for aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes.

2.2.3 ASBS - Preservation of Areas of Special Biological Significance

Includes marine life refuges, ecological reserves and designated areas of special biological significance, such as areas where kelp propagation and maintenance are features of the marine environment requiring special protection.

2.2.4 COLD - Cold Freshwater Habitat

Uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

2.2.5 COMM - Commercial and Sport Fishing

Uses of water for commercial, recreational (sport) collection of fish, shellfish, or other aquatic organisms including, but not limited to, uses involving organisms intended for human consumption or bait purposes.

2.2.6 CUL - Native American Culture

Uses of water that support the cultural and/or traditional rights of indigenous people such as subsistence fishing and shellfish gathering, basket weaving and jewelry material collection, navigation to traditional ceremonial locations, and ceremonial uses.

2.2.7 EST - Estuarine Habitat

Uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds).

2.2.8 FISH - Subsistence Fishing

Uses of water that support subsistence fishing.

2.2.9 FLD - Flood Peak Attenuation/Flood Water Storage

Uses of riparian wetlands in flood plain areas and other wetlands that receive natural surface drainage and buffer its passage to receiving waters.

2.2.10 FRSH - Freshwater Replenishment

Uses of water for natural or artificial maintenance of surface water quantity or quality (e.g., salinity).

2.2.11 GWR - Groundwater Recharge

Uses of water for natural or artificial recharge of groundwater for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.

2.2.12 IND - Industrial Service Supply

Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization.

2.2.13 MAR - Marine Habitat

Uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g., marine mammals, shorebirds).

2.2.14 MIGR - Migration of Aquatic Organisms

Uses of water that support habitats necessary for migration or other temporary activities by aquatic organisms, such as anadromous fish.

2.2.15 MUN - Municipal and Domestic Supply

Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.

2.2.16 NAV - Navigation

Uses of water for shipping, travel, or other transportation by private, military or commercial vessels.

2.2.17 POW - Hydropower Generation

Uses of water for hydropower generation.

2.2.18 PRO - Industrial Process Supply

Uses of water for industrial activities that depend primarily on water quality.

2.2.19 RARE - Rare, Threatened, or Endangered Species

Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.

2.2.20 REC-1 - Water Contact Recreation

Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white-water activities, fishing, or use of natural hot springs.

2.2.21 REC-2 - Non-Contact Water Recreation

Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

2.2.22 SAL - Inland Saline Water Habitat

Uses of water that support inland saline water ecosystems including, but not limited to, preservation or enhancement of aquatic saline habitats, vegetation, fish, or wildlife, including invertebrates.

2.2.23 SHELL - Shellfish Harvesting

Uses of water that support habitats suitable for the collection of filter-feeding shellfish (e.g., clams, oysters, and mussels) for human consumption, commercial, or sports purposes.

2.2.24 SPWN - Spawning, Reproduction, and/or Early Development

Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.

2.2.25 WARM - Warm Freshwater Habitat

Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

2.2.26 WET - Wetland Habitat

Uses of water that support natural and man-made wetland ecosystems, including, but not limited to, preservation or enhancement of unique wetland functions, vegetation, fish, shellfish, invertebrates, insects, and wildlife habitat.

2.2.27 WILD - Wildlife Habitat

Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

2.2.28 WQE - Water Quality Enhancement

Uses of waters, including wetlands and other waterbodies, that support natural enhancement or improvement of water quality in or downstream of a waterbody including, but not limited to, erosion control, filtration and purification of naturally occurring water pollutants, streambank stabilization, maintenance of channel integrity, and siltation control.

2.3 IDENTIFYING EXISTING AND POTENTIAL BENEFICIAL USES

Existing and potential beneficial uses of water are identified for given waterbodies or categories of waters (e.g. bays/harbors, groundwater). Designated uses⁵ are those uses specified for a waterbody or waterbody segment, whether or not they are being attained. (40 CFR §131.3(f).) Attainable uses are uses that can be achieved when technologies are implemented to achieve effluent limits under Clean Water Act section 306 and/or when cost-effective and reasonable Best Management Practices (BMPs) are imposed.

Water quality objectives are established to ensure the reasonable protection of beneficial uses (Wat. Code, § 13240.) and to be sufficiently stringent to protect the most sensitive beneficial use. The Regional Water Board reserves the right to balance the values and priorities of competing beneficial uses. However, the assimilation of waste is not a beneficial use, and the discharge of waste is a privilege and not a right.

Existing uses are uses that were attained in a waterbody on or after November 28, 1975.⁶ This was the date of the first Water Quality Standards Regulation published by USEPA. Existing uses cannot be removed or modified unless a use requiring more stringent criteria is added.⁷ However, a use requiring more stringent criteria can always be added because doing so reflects the goal of further improvement of water quality.

Federal law requires that, wherever it is attainable, water quality shall provide for the protection and propagation of fish, shellfish, and wildlife and provide for recreation in and on the water (i.e. fishable/swimmable goals). For example, the Clean Water Act⁸ creates a “rebuttable presumption” that fishable and swimmable uses are attainable. This means that most surface waters in the North Coast Region have aquatic life and recreational beneficial uses.

A potential beneficial use of a waterbody may be established for any of the following reasons:

1. The use existed before November 28, 1975 but is not currently being attained.
2. Plans currently exist to put the water to that use.
3. Conditions make such future use likely.

⁵ Federal law uses the term “designated use” and applies “criteria” designed to protect the use, whereas state law uses the term “beneficial use” and applies “objectives” to protect the uses.

⁶ 40 CFR 131.3 (e).

⁷ The state may propose the removal of a potential beneficial use of water upon demonstrating that attaining the use is not feasible. (40 CFR §131.10(g).) A use attainability analysis (UAA) must be conducted to justify the proposed change. A UAA is a structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors. (40 CFR §131.3(g).)

⁸ Clean Water Act § 101(a)(2) (33 USC §1251(a).

4. The water has been identified as a potential source of drinking water⁹ based on the quality and quantity available.
5. Although existing water quality does not support the use, remedial measures¹⁰ may lead to attainment in the future.
6. While there is insufficient information to support the use as existing, the potential for the use exists, and upon future review the potential use may be re-assigned as existing.

The establishment of a potential beneficial use can have different purposes, such as establishing a water quality goal that must be achieved through control actions in order to re-establish a beneficial use, or it can be used to protect the existing quality of a water source for eventual use.

A beneficial use is to be protected in any location that it is found, regardless of whether it is identified for a specific hydrologic unit in the Basin Plan.

Seasonal cycles and variations affect many beneficial uses. For example, many waterbodies in the region support a seasonal migration of anadromous fish (MIGR) in fall and winter and they are used for recreational swimming (REC-1) in summer. Recognizing the seasonality of these beneficial uses is part of the Regional Water Board's responsibility.

As presented in Table 2-1 (table of beneficial uses), an "E" indicates an existing use and a "P" indicates a potential use. Uses in both classifications are to be equally protected.

Large and small communities as well as individual landowners in the North Coast Region depend on surface waterbodies for their municipal and domestic water supply (MUN). The larger surface waterbodies used as a municipal water supply include, but are not limited to, the Smith, Mad, Noyo, Gualala, and Russian rivers.

Recreational use (REC-1 and REC-2) occurs in all fresh water and saltwater hydrologic units in the North Coast Region. Water recreation uses in the region attract millions of people annually and the numbers are expected to grow as population increases. This area has rugged natural beauty and, historically, some of the most renowned fishing streams in North America. The North Coast Region has many unique characteristics: diverse topography including a scenic ocean shoreline and rugged inland mountains, diverse forest environments including a large forested belt which contains more than half of California's redwoods, and productive agricultural lands.

⁹ State Water Board Resolution 88-63.

¹⁰ Remedial measures include implementation of effluent limits required under Clean Water Act section 301(b) and 306, and implementation of cost-effective and reasonable best management practices for nonpoint source control. (40 CFR 131.10(d)).

Coastal areas receiving the greatest recreational use have been the ocean beaches, the lower reaches of rivers flowing to the ocean, and Humboldt and Bodega bays and Bodega Harbor. Streams receiving the largest levels of recreational use are the Russian, Eel, Mad, Smith, Trinity, and Navarro rivers, and Redwood Creek. Activities cover the spectrum of water-oriented recreation. Fishing, river rafting, kayaking, and canoeing are popular on the rivers, and fishing, shellfish harvesting, beach combing, and surfing predominate at the ocean beaches and bays. Photography, painting, bird watching, and sightseeing are important recreational activities which take place throughout the North Coast Region.

Virtually all surface waters in the North Coast Region are home to fish and wildlife. Coastal waters and streams support anadromous fish, which are important for commercial and sport fishing (COMM), Native American cultural uses (CUL), and subsistence fishing (FISH). Historically, coastal and inland streams in the North Coast Region provided thousands of miles of habitat suitable for salmon and steelhead spawning and rearing. Recent focus has been placed on re-establishment of the once productive salmonid runs in the North Coast Region through habitat restoration and educational outreach.

Humboldt y and Bodega bays and Bodega Harbor support shellfish (SHELL) and fish populations, which are very important to both the commercial fishing industry and recreational users. Both bays also provide refuge for wildlife populations especially waterfowl, shorebirds, and other water-associated birds.

Many of the watersheds of the North Coast Region support plant and wildlife species that are recognized as rare, threatened, and endangered (RARE). A few examples include the Swainson's hawk (*Buteo swainsoni*), Bald eagle (*Haliaeetus leucocephalus*), American peregrine falcon (*Falco peregrinus tundrias*), Coho Salmon (*Oncorhynchus kisutch*), Chinook Salmon (*Oncorhynchus tshawytscha*), Steelhead (*Oncorhynchus mykiss*), Lost River sucker (*Deltistes luxatus*), Shortnose sucker (*Chamistes brevirostris*), California freshwater shrimp (*Syncares pacificaz*), Baker's larkspur (*Delphinium hesperium* sp. *Cuyamaca*), and Sebastopol meadowfoam (*Limnanthes vinculans*), all of which have been observed in watersheds within the North Coast Region.

Navigation (NAV) is vital to the economy of the North Coast Region. There are fishing ports at Crescent City, Eureka, Fort Bragg, and Bodega Harbor. The principal commercial harbor between San Francisco and Coos Bay, Oregon, is the Port of Eureka in Humboldt Bay.

The hydroelectric power generation (POW) projects in the North Coast Region are:

- 1) The Klamath River Project, consisting of Iron Gate Reservoir and Copco Reservoir on the Klamath River.
- 2) Trinity Dam, holding Trinity Lake (formerly Clair Engle Lake) on the Trinity River.
- 3) Lewiston Dam, which forms Lewiston Reservoir on the Trinity River.
- 4) Matthews Dam, which holds Ruth Lake on the Mad River.

- 5) Coyote Dam, which holds Lake Mendocino on the East Fork of the Russian River.
- 6) Warm Springs Dam, which holds Lake Sonoma on Dry Creek, a tributary to the Russian River.
- 7) The Potter Valley Project, which consists of three components, a) Scott Dam holding Lake Pillsbury on the upper East Fork Eel River, b) Cape Horn Dam holding Van Arsdale Reservoir as a diversion storage facility, and c) a tunnel carrying diverted Eel River water beneath the divide to Potter Valley to the East Fork Russian River.

Many large and small communities as well as individual landowners in the North Coast Region rely, exclusively or in part, on groundwater for municipal or domestic use (MUN). Communities in the region which use groundwater as their drinking water supply include, but are not limited, to Santa Rosa, Sebastopol, Rohnert Park, Ukiah, and Yreka. Almost all landowners outside the city limits of the large communities also rely exclusively on groundwater for domestic use. Other beneficial uses for groundwater include: Industrial Water Supply (IND), Industrial Process Water Supply (PRO), Agricultural Water Supply (AGR), and Freshwater Replenishment to Surface Waters (FRSH). Occasionally, groundwater is used for other purposes (e.g., groundwater pumped for use in aquaculture operations (AQUA)).

2.4 GENERAL CATEGORIES OF WATERBODIES

Beneficial uses are assigned for all waters in the North Coast Region. The waterbodies are separated into various categories. Wetlands and groundwater are described outside of the coastal and inland waters categories, as they are unique waterbodies that require more detailed descriptions. Freshwater and saline wetlands are combined for the purposes of discussion on wetlands, but separated in Table 2-1 for the purpose of identification of beneficial uses. Each waterbody category is defined or generally described below.

2.4.1 COASTAL WATERS

Coastal waters discussed in this section may be defined as waters subject to tidal action and include ocean waters, enclosed bays, harbors, estuaries, and lagoons and are described below. In addition to this Basin Plan, the California Ocean Plan, the Thermal Plan, and the Enclosed Bays and Estuaries Policy describe water quality objectives and actions necessary for the protection of coastal waters.

2.4.1.1 Ocean Waters

Ocean waters are territorial marine waters of the region as defined by California law to the extent that these waters are outside of enclosed bays, estuaries, and coastal lagoons.

2.4.1.2 Enclosed Bays

Enclosed bays are indentations along the coast, which enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest difference between the headlands or outermost harbor works is less than seventy-five percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays do not include inland surface waters or ocean waters.

2.4.1.3 Estuaries

Estuaries are tidal areas located at the mouths of streams, which are sometimes temporarily separated from the ocean by sandbars. Estuarine waters extend from a bay or the open ocean to a point upstream where the freshwater of the river mixes with the saline ocean water. All coastal lagoons of the North Coast Region are included in the estuaries category.

The mouths of most of the rivers and creeks are continually affected by tidal action and present a relatively stable environment for wildlife and vegetation. Other coastal lagoons may be separated from tidal action by earthen deposits and thus present an environment with major seasonal variations. Such conditions result in the development of a unique biologic community highly specific to that area. Occasionally, the mouths of these coastal lagoons are opened subjecting the lagoons to tidal flushing which causes short-term changes to the habitat conditions and enhancement of the recreational uses. This action does not alter the beneficial uses of the coastal lagoons.

2.4.2 INLAND SURFACE WATERS

Inland surface waters as presented in this section consist of rivers and streams, lakes and reservoirs, and inland wetlands.

2.4.2.1 Rivers and Streams

To reflect the Clean Water Act “fishable/swimmable” goals, the beneficial uses of the inland surface waters in the North Coast Region generally include:

- Water Contact Recreation (REC-1).
- Cold Freshwater Habitat (COLD).
- Warm Freshwater Habitat (WARM).
- Spawning, Reproduction, and Development (SPWN).
- Migration of Aquatic Organisms (MIGR).
- Commercial and Sport Fishing (COMM).

Inland surface waters that meet the criteria mandated by the State Water Board's Sources of Drinking Water Policy¹¹ are assigned the Municipal and Domestic Supply (MUN) beneficial use. Most of the inland surface waters in the North Coast Region are protected as existing or potential sources of drinking water. Many individual residents and small communities rely exclusively, or in large part, on surface water for their sources of drinking water.

Many rivers and streams in the North Coast Region are primary sources of replenishment for major groundwater areas that supply water for drinking and other uses, and as such must be protected as Groundwater Recharge (GWR).

2.4.2.2 Lakes and Reservoirs

A lake and reservoirs are depressions that are natural or artificial impoundments of water. All lakes and reservoirs in the region are designated with Water Contact Recreation (REC-1), reflecting the federal Clean Water Act fishable/swimmable goals. Water Contact Recreation (REC-1) uses often can often be restricted or prohibited by the entities that manage these waters.

2.4.2.3 Wetlands

Wetlands are waters of the state and are protected under state regulations by provisions of the California Water Code. In addition, wetlands are protected under the federal Clean Water Act, which was enacted with a goal to restore and maintain the physical, chemical, and biological integrity of the nation's waters, including wetlands. Federal regulations define wetlands as: "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."¹²

Although the definition of wetlands differs widely among federal agencies, both the USEPA and the U.S. Army Corps of Engineers use this definition in administering the Clean Water Act section 404 discharge permit program.

Federal regulation defines wetlands as a subset of "Waters of the United States" for purposes of the federal Clean Water Act. Waters of the state are defined as "any water, surface or underground, including saline waters, within the boundaries of the state"¹³. The definition of waters of the state is broader than the definition of waters of the United States. Under state law, wetlands are waters of the state and wetland water quality control is within the jurisdiction of the State of California and Regional Water Boards

¹¹ State Water Board Resolution 88-63.

¹² 40 CFR 116.3.

¹³ CWA 13050[e].

independent of federal law, and need not meet federal jurisdictional requirements under the Clean Water Act section 404 to trigger regulatory controls.

The Regional Water Board recognizes that wetlands are frequently referred to under the following names (or classifications): saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, sandflats, unvegetated seasonal ponded areas, vegetated shallows, sloughs, wet meadows, fens, playa lakes, natural ponds, vernal pools, diked bay lands, seasonal wetlands, and riparian woodlands.

2.4.2.4 Groundwater

Groundwater is defined as subsurface water in soils and geologic formations that are fully saturated all or part of the year. This definition includes water in areas where saturation of the soils and geologic units fluctuates, including areas of fracture porosity and capillary fringe. Groundwater does not include subterranean streams, which have the beneficial uses of surface water. Groundwater bearing formation sufficiently permeable to transmit and yield significant quantities of water is called an aquifer.

A groundwater basin is defined as a hydrogeologic unit containing one large aquifer or several connected and interrelated aquifers and having the character of a basin with respect to the collection, retention, and outflow of water. The California Department of Water Resources identifies 62 groundwater basins in the North Coast Region, including four basins that are divided into a total of nine subbasins. The basins range in size from one square mile to 135 mi² and underlie about 7.5 percent of the North Coast Region. Beneath much of the remaining 92.5 percent of the region, groundwater is available from fracture zones in bedrock (fracture porosity). The quantity and depth of water in fractured bedrock may be highly variable and unpredictable.

For basin planning purposes, the term “groundwater” includes all subsurface waters except subterranean streams, whether these waters occur in a groundwater basin, an aquifer outside a groundwater basin, or in fracture zones in bedrock.

2.5 KEY TO TABLE 2-1

The list of beneficial uses in Table 2-1 reflects demands on the water resources of the North Coast Region. Attainment and protection of water quality objectives will adequately protect the quality of the waters of the region for future generations.

Table 2-1 lists beneficial uses of inland surface waters by hydrologic unit, hydrologic area, hydrologic subarea, and in some cases, by specific waterbody. General categories located at the end of Table 2-1 list the beneficial uses of bays/harbors, estuaries/lagoons, ocean waters, minor coastal streams, freshwater and saline wetlands, and groundwater.

Within Table 2-1, hydrologic unit, area, and sub-area numbers are shown as developed for the state's hydrologic basin planning system. For uniformity purposes, the CalWater system was developed by a state and federal interagency committee in 1997. CalWater is a set of standardized watershed boundaries for California nested into larger previously standardized watersheds, which meet standardized delineation criteria.

CalWater Number

This column contains a numeric identifier in a specified order representing specific subdivisions of drainage used by the CalWater classification system.

Hydrologic Unit/Area/Subarea/Drainage Feature

This column contains (in bold type) the names of watersheds and subwatersheds corresponding to the hydrologic unit (HU), hydrologic area (HA), or hydrologic subarea (HSA) number in the preceding column. The definitions of these area classifications are provided below.

HU: Hydrologic Unit

The North Coast Region is divided into fourteen hydrologic units, which are defined by surface drainage as well as topographic and geographic conditions. A hydrologic unit may encompass a major river watershed or a major groundwater basin, contiguous watersheds with similar hydrogeologic characteristics, or a closed drainage area, such as a desert basin or group of such basins.

HA: Hydrologic Area

Major subdivisions of hydrologic units. Best described as major tributaries of a river, large valley groundwater basin, or a component of a stream or desert basin group.

HSA: Hydrologic Subarea

Consists of a major segment of a hydrologic area having significant geographical characteristics of hydrological homogeneity.

Drainage Feature/Waterbody

An individual waterbody, which has been listed as a distinct feature of the hydrologic subunit in which it exists, based on unique beneficial uses.

Beneficial Uses

The subheadings under this heading are abbreviations of beneficial uses, which are defined above in Section 2.2. An "E" indicates an existing beneficial use and a "P" indicates a potential beneficial use in the corresponding hydrologic area, sub-area, or waterbody.

TABLE 2-1. BENEFICIAL USES OF WATERS OF THE NORTH COAST REGION
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CalWater Number	HYDROLOGIC UNIT/HYDROLOGIC AREA/ HYDROLOGIC SUBAREA/DRAINAGE FEATURE NAME	BENEFICIAL USES																											
		AGR	AQUA	ASBS	COLD	COMM	CUL	EST	FISH	FLD	FRSH	GWR	IND	MAR	MIGR	MUN	NAV	POW	PRO	RARE	REC1	REC2	SAL	SHELL	SPWN	WARM	WET	WILD	WQE
101.00	Winchuck River Hydrologic Unit																												
	Winchuck River	E	P		E	E					E		E		E	E	E	P	P	E	E	E			E			E	
102.00	Rogue River Hydrologic Unit																												
102.20	Illinois River Hydrologic Area	E	E		E	E					E		E		E	E	E	E	P	E	E	E			E			E	
102.30	Applegate River Hydrologic Area	E	P		E	E					E		E		E	E	E	P	E	E	E	E			E			E	
103.00	Smith River Hydrologic Unit																												
103.10	Lower Smith River Hydrologic Area																												
103.11	Smith River Plain Hydrologic Subarea	E	P		E	E	E	E			E		E	E	E	E	E		P	E	E	E			E			E	
	Lake Talawa		P		E	E	E				E				E	P	E			E	E	E				E		E	
	Lake Earl	E	P		E	E	E				E		E		E	E	E			E	E	E				E		E	
	Crescent City Harbor		E		E	E					E			E	E		E			E	E	E		E		P		E	
103.12	Rowdy Creek Hydrologic Subarea	E	P		E	E					E		E		E	E	E	P	P	E	E	E			E			E	
103.13	Mill Creek Hydrologic Subarea	E	P		E	E					E		E		E	E	E	P	P	E	E	E			E			E	
103.20	South Fork Smith River Hydrologic Area	E	P		E	E	E				E		E		E	E	E	E	P	E	E	E			E			E	
103.30	Middle Fork Smith River Hydrologic Area	E	E		E	E	P				E		E		E	E	E	E	P	E	E	E			E			E	
103.40	North Fork Smith River Hydrologic Area	E	P		E	E					E		E		E	E	E	E	P	E	E	E			E			E	
103.50	Wilson Creek Hydrologic Area	E	P		E	E	E				E		E		E	E	E	E	P	E	E	E			E			E	
105.00	Klamath River Hydrologic Unit																												
105.10	Lower Klamath River Hydrologic Area																												
105.11	Klamath Glen Hydrologic Subarea	E	P		E	E	E	E			E	E	P	E	E	E	E	P	P	E	E	E		E	E	E		E	
105.12	Orleans Hydrologic Subarea	E	P		E	E	E				E	E	E		E	E	E	P	P	E	E	E		P	E	E		E	
105.20	Salmon River Hydrologic Area																												
105.21	Lower Salmon Hydrologic Subarea	E	P		E	E	E				E		E		E	E	E	P	P	E	E	E		P	E			E	
105.22	Wooley Creek Hydrologic Subarea	P	P		E	E	E				E	E	E		E	E	E	P	P	E	E	E		P	E			E	
105.23	Sawyers Bar Hydrologic Subarea	E	P		E	E					E		E		E	E	E	P	P	E	E	E		P	E			E	
105.24	Cecilville Hydrologic Subarea	E	P		E	E					E		E		E	E	E	P	P	E	E	E		P	E			E	

TABLE 2-1. BENEFICIAL USES OF WATERS OF THE NORTH COAST REGION
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CalWater Number	HYDROLOGIC UNIT/HYDROLOGIC AREA/ HYDROLOGIC SUBAREA/DRAINAGE FEATURE NAME	BENEFICIAL USES																											
		AGR	AQUA	ASBS	COLD	COMM	CUL	EST	FISH	FLD	FRSH	GWR	IND	MAR	MIGR	MUN	NAV	POW	PRO	RARE	REC1	REC2	SAL	SHELL	SPWN	WARM	WET	WILD	WQE
105.30	Middle Klamath River Hydrologic Area																												
105.31	Ukonom Hydrologic Subarea	E	P		E	E	E				E	E	E		E	E	E	P	E	E	E	E			E	E		E	
105.32	Happy Camp Hydrologic Subarea	E	P		E	E	E				E	E	E		E	E	E	P	E	E	E	E			E	E		E	
105.33	Seiad Valley Hydrologic Subarea	E	P		E	E	E				E	E	E		E	E	E	P	E	E	E	E			E	E		E	
105.35	Beaver Creek Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	E	E	E	E			E	E		E	
105.36	Hornbrook Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	E	E	E	E			E	E		E	
105.37	Iron Gate Hydrologic Subarea	P	E		E	E					E		P		E	P	E	E	P	E	E	E		E	E	E		E	
105.38	Copco Lake Hydrologic Subarea	E	E		E	E					E		E		E	E	E	E	P	E	E	E			E	E		E	
105.40	Scott River Hydrologic Area																												
105.41	Scott Bar Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	E	P	E	E	E			E			E	
105.42	Scott Valley Hydrologic Subarea	E	E		E	E					E	E	E		E	E	E	E	P	E	E	E			E			E	
105.50	Shasta Valley Hydrologic Area																												
	Shasta River and Tributaries	E	E		E	E					E	E	E		E	E	E	P	P	E	E	E			E	E		E	
	Lake Shastina	E	P		E						E	E	P		P	P	E		P		E	E				E		E	
	Lake Shastina Tributaries	E	P		E	E					E	E	E		E	E	P	P	P		E	E			E	E		E	
105.80	Butte Valley Hydrologic Area																												
105.81	Macdoel-Dorris Hydrologic Subarea	E	P		E	E							P		E	E		E	P	E	E	E			E	E		E	
	Meiss Lake	E	P		E							E	P			E			P		P	E				E		E	
105.82	Bray Hydrologic Subarea	E	P			E									E	E		P		E	E	E			E	E		E	
105.83	Tennant Hydrologic Subarea	E	P		E	P					E	E	P		E	E		P	P	P	E	E			E	P		E	
105.90	Lost River Hydrologic Area																												
105.91	Mount Dome Hydrologic Subarea	E	P		E	P					E	E	P		E	P		P	P	E	P	E			E	E		E	
105.92	Tule Lake Hydrologic Subarea	E	P		P	E					E	E	P		E	P			P	E	P	E			E	E		E	
105.93	Clear Lake Hydrologic Subarea	E	P		E	E					E	E	P		E	P	P	P	P	E	E	E		P	E	E		E	
105.94	Boles Hydrologic Subarea	E	P		E	E					E	E	P		E	P		P	P	E	P	E		P	E	E		E	

TABLE 2-1. BENEFICIAL USES OF WATERS OF THE NORTH COAST REGION
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CalWater Number	HYDROLOGIC UNIT/HYDROLOGIC AREA/ HYDROLOGIC SUBAREA/DRAINAGE FEATURE NAME	BENEFICIAL USES																											
		AGR	AQUA	ASBS	COLD	COMM	CUL	EST	FISH	FLD	FRSH	GWR	IND	MAR	MIGR	MUN	NAV	POW	PRO	RARE	REC1	REC2	SAL	SHELL	SPWN	WARM	WET	WILD	WQE
106.00	Trinity River Hydrologic Unit																												
106.10	Lower Trinity River Hydrologic Area																												
106.11	Hoopla Hydrologic Subarea	E	P		E	E	E				E	E	E		E	E	E	P	P	E	E	E		P	E			E	
106.12	Willow Creek Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	E	P	E	E	E		P	E			E	
106.13	Burnt Ranch Hydrologic Subarea	E	E		E	E					E	E	E		E	E	E	P	P	E	E	E		P	E			E	
106.14	New River Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	P	E	E	E		P	E			E	
106.15	Helena Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	P	E	E	E		P	E			E	
106.20	South Fork Trinity River Hydrologic Area																												
106.21	Grouse Creek Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	P	E	E	E			E			E	
106.22	Hyampom Hydrologic Subarea	E	P		E	E					E	E	E		E	E	P	E	P	E	E	E			E			E	
106.23	Forest Glen Hydrologic Subarea	E	P		E	E					E	E	E		E	E	P	P	P	E	E	E			E			E	
106.24	Corral Creek Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	P	E	E	E			E			E	
106.25	Hayfork Valley Hydrologic Subarea	E	P		E	E					E	E	E		E	E		P	E	E	E	E			E			E	
	Ewing Reservoir		P		E	E							P			E	E		P	E	P	E				E		E	
106.30	Middle Trinity Hydrologic Area																												
106.31	Douglas City Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	P	E	E	E			E			E	
106.32	Weaver Creek Hydrologic Subarea	E	E		E	E					E	E	E		E	E	E	P	P	E	E	E			E			E	
106.40	Upper Trinity River Hydrologic Area																												
	Trinity Lake (formerly Clair Engle Lake)	E	P		E	E					E	E	E		P	E	E	E	E	E	E	E			E	E		E	
	Lewiston Reservoir	E	E		E	E					E	E	P		P	E	E	E	P	E	E	E			E	P		E	
	Trinity River	E	E		E	E					E	E	P		E	E	E	P	P	E	E	E			E			E	
107.00	Redwood Creek Hydrologic Unit																												
107.10	Orick Hydrologic Area	E	P		E	E	E	E				E	E	E	E	E	E	P	P	E	E	E			E			E	
107.20	Beaver Hydrologic Area	E	P		E	E					E	E			E	E	E	P	P	E	E	E			E			E	
107.30	Lake Prairie Hydrologic Area	E	P		E	E					E	E			E	E	E	P	P	E	E	E			E			E	
108.00	Trinidad Hydrologic Unit																												
108.10	Big Lagoon Hydrologic Area	E	P	E	E	E	E	E			E	E	E	E	E	E	E		P	E	E	E			E			E	
108.20	Little River Hydrologic Area	E	P		E	E	E	E			E	E	E	E	E	P	E		P	E	P	E			E			E	

TABLE 2-1. BENEFICIAL USES OF WATERS OF THE NORTH COAST REGION
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CalWater Number	HYDROLOGIC UNIT/HYDROLOGIC AREA/ HYDROLOGIC SUBAREA/DRAINAGE FEATURE NAME	BENEFICIAL USES																											
		AGR	AQUA	ASBS	COLD	COMM	CUL	EST	FISH	FLD	FRSH	GWR	IND	MAR	MIGR	MUN	NAV	POW	PRO	RARE	REC1	REC2	SAL	SHELL	SPWN	WARM	WET	WILD	WQE
109.00	Mad River Hydrologic Unit																												
109.10	Blue Lake Hydrologic Area	E	E		E	E	E	E			E	E	E	P	E	E	E	P	E	E	E	E			E			E	
109.20	North Fork Mad River Hydrologic Area	E	P		E	E					E	E	E		E	E	E	P	E	E	E	E			E			E	
109.30	Butler Valley Hydrologic Area	E	P		E	E	E				E	E	E		E	E	E	P	E	E	E	E			E			E	
109.40	Ruth Hydrologic Area	E	P		E	E					E	E	E		E	E	E	E	E	E	E	E			E	E		E	
110.00	Eureka Plain Hydrologic Unit																												
	Jacoby Creek	E	P		E	E	E	E*			E	E	E		E	E	E	P	P	E	E	E			E			E	
	Freshwater Creek	E	E		E	E	E	E*			E	E	E		E	E	E	P	P	E	E	E			E			E	
	Elk River	E	P		E	E		E*			E	E	E		E	E	E	P	P	E	E	E			E			E	
	Salmon Creek	E	P		E	E	E	E*			E	E	E		E	E	E	P	P	E	E	E			E			E	
	Humboldt Bay	E	E		E	E	E	E*			E		E	E	E	E	E	P	P	E	E	E		E	E			E	
111.00	Eel River Hydrologic Unit																												
111.10	Lower Eel River Hydrologic Area																												
111.11	Ferndale Hydrologic Subarea	E	P		E	E	E	E			E	E	E	P	E	E	E	P	P	E	E	E		E	E			E	
111.12	Scotia Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	P	E	E	E			E			E	
111.13	Larabee Creek Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	P	E	E	E			E			E	
111.20	Van Duzen River Hydrologic Area																												
111.21	Hydesville Hydrologic Subarea	E	P		E	E	E				E	E	E		E	E	E	P	P	E	E	E			E	E		E	
111.22	Bridgeville Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	E	P	E	E	E			E	E		E	
111.23	Yager Creek Hydrologic Subarea	E	E		E	E	E				E	E	E		E	E		P	P	E	E	E			E	E		E	
111.30	South Fork Eel River Hydrologic Area																												
111.31	Weott Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	P	E	E	E			E	E		E	
111.32	Benbow Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	P	E	E	E			E	E		E	
111.33	Laytonville Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	P	E	E	E			E	E		E	
111.40	Middle Fork Eel River Hydrologic Area																												
111.41	Sequoia Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	E	P	E	E	E			E	E		E	
111.42	Spy Rock Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	E	P	E	E	E			E	E		E	

* EST use applies only to estuarine portion of the water body as defined in Chapter 2.

TABLE 2-1. BENEFICIAL USES OF WATERS OF THE NORTH COAST REGION
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CalWater Number	HYDROLOGIC UNIT/HYDROLOGIC AREA/ HYDROLOGIC SUBAREA/DRAINAGE FEATURE NAME	BENEFICIAL USES																											
		AGR	AQUA	ASBS	COLD	COMM	CUL	EST	FISH	FLD	FRSH	GWR	IND	MAR	MIGR	MUN	NAV	POW	PRO	RARE	REC1	REC2	SAL	SHELL	SPWN	WARM	WET	WILD	WQE
111.50	North Fork Eel River Hydrologic Area	E	P		E	E					E	E	E		E	E	E	E	P	E	E	E			E	E		E	
111.60	Upper Main Eel River Hydrologic Area																												
111.61	Outlet Creek Hydrologic Subarea	E	E		E	E					E	E		E	E	E	E	P	P	E	E	E			E	E		E	
111.62	Tomki Creek Hydrologic Subarea	E	E		E	E					E	E	E		E	E	E	P	P	E	E	E			E	E		E	
111.63	Lake Pillsbury Hydrologic Subarea	E	E		E	E					E	E	E		E	E	E	E	P	E	E	E			E	E		E	
111.70	Middle Fork Eel River Hydrologic Area																												
111.71	Eden Valley Hydrologic Subarea	E	E		E	E					E		E		E	E	E	P	P	E	E	E			E	E		E	
111.72	Round Valley Hydrologic Subarea	E	E		E	E					E	E	E		E	E	E	P	P	E	E	E			E	P		E	
111.73	Black Butte River Hydrologic Subarea	E	P		E	E					E		E		E	E	E	E	P	E	E	E			E	E		E	
111.74	Wilderness Hydrologic Subarea	E	P		E	E					E		E		E	E	E	E	P	E	E	E			E	E		E	
112.00	Cape Mendocino Hydrologic Unit																												
112.10	Oil Creek Hydrologic Area	E	E		E	E	E	E			E		E		E	P		P	P	E	E	E			E			E	
112.20	Capetown Hydrologic Area	E	P		E	E	E				E	E	E		E	E	E	P	P	E	E	E			E			E	
112.30	Mattole River Hydrologic Area	E	E		E	E		E			E	E	E		E	E	E	P	P	E	E	E			E	P		E	
113.00	Mendocino Coast Hydrologic Unit																												
113.10	Rockport Hydrologic Area	E	P		E	E		E			E	E	E		E	E	E	P	P	E	E	E			E			E	
113.11	Usal Creek Hydrologic Subarea	P			E	E					E	E	P		E	E	E	P	P	E	E	E			E			E	
113.12	Wages Creek Hydrologic Subarea	E			E	E					E	E	E		E	E	E	P	P	E	E	E			E			E	
113.13	Ten Mile River Hydrologic Subarea	E	P		E	E		E			E	E	E		E	E	E	P	P	E	E	E			E			E	
113.20	Noyo River Hydrologic Area	E	E		E	E		E			E	E	E		E	E	E	E	P	E	E	E			E			E	
113.30	Big River Hydrologic Area	E	P		E	E		E			E	E	E		E	E	E	P	P	E	E	E			E			E	
113.40	Albion River Hydrologic Area	E	P		E	E		E			E	E	E		E	E	E	P	P	E	E	E			E			E	
113.50	Navarro River Hydrologic Area	E	P		E	E		E			E	E	E		E	E	E	P	P	E	E	E			E			E	
113.60	Pt Arena Hydrologic Area																												
113.61	Greenwood Creek Hydrologic Subarea	E	P		E	E		E			E	E	E		E	E	E	P	P	E	E	E			E			E	
113.62	Elk Creek Hydrologic Subarea	P	P		E	E		E			E	E	E		E	P	E	P	P	E	E	E			E			E	
113.63	Alder Creek Hydrologic Subarea	E	P		E	E		E			E	E	E		E	E	E	P	P	E	E	E			E			E	
113.64	Brush Creek Hydrologic Subarea	E	P		E	E		E			E	E	E		E	E	E	P	P	E	E	E			E			E	

TABLE 2-1. BENEFICIAL USES OF WATERS OF THE NORTH COAST REGION
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CalWater Number	HYDROLOGIC UNIT/HYDROLOGIC AREA/ HYDROLOGIC SUBAREA/DRAINAGE FEATURE NAME	BENEFICIAL USES																											
		AGR	AQUA	ASBS	COLD	COMM	CUL	EST	FISH	FLD	FRSH	GWR	IND	MAR	MIGR	MUN	NAV	POW	PRO	RARE	REC1	REC2	SAL	SHELL	SPWN	WARM	WET	WILD	WQE
113.70	Garcia River Hydrologic Area	E	P		E	E		E			E		E		E	E	E	P	P	E	E	E			E			E	
113.80	Gualala River Hydrologic Area																												
113.81	North Fork Gualala Hydrologic Subarea	E	E		E	E					E	E	E		E	E	E	P	P	E	E	E			E			E	
113.82	Rockpile Creek Hydrologic Subarea	E	P		E	E		E				E	E		E	E	E	P	P	E	E	E			E	E		E	
113.83	Buckeye Creek Hydrologic Subarea	E	P		E	E						E	E		E	E	E	P	P	E	E	E			E	E		E	
113.84	Wheatfield Fork Hydrologic Subarea	E	P		E	E						E	E		E	E	E	P	P	E	E	E			E	E		E	
113.85	Gualala Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	P	E	E	E			E	E		E	
113.90	Russian Gulch Hydrologic Area	E	E		E	P						E	E		E	E			P		E	E			E			E	
114.00	Russian River Hydrologic Unit																												
114.10	Lower Russian River Hydrologic Area																												
114.11	Guerneville Hydrologic Subarea	E	P		E	E		E			E	E	E		E	E	E	P	P	E	E	E		P	E	E		E	
114.12	Austin Creek Hydrologic Subarea	E	P		E	E						E	E		E	E	E	P	P	E	E	E			E	E		E	
114.20	Middle Russian River Hydrologic Area																												
114.21	Laguna Hydrologic Subarea	E	P		E	E					E	E	E		E	P	E	E	P	E	E	E		P	E	E		E	
114.22	Santa Rosa Hydrologic Subarea	E	P		E	E						E	E		E	E	E	P	P	E	E	E		P	E	E		E	
114.23	Mark West Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	P	E	E	E		P	E	E		E	
114.24	Warm Springs Hydrologic Subarea	E	E		E	E					E	E	E		E	E	E	E	P	E	E	E			E	E		E	
114.25	Geyserville Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	P	P	E	E	E		P	E	E		E	
114.26	Sulphur Creek Hydrologic Subarea	E	P		E	E						E	E		E	E	E	P	P	E	E	E			E	E		E	
114.30	Upper Russian River Hydrologic Area																												
114.31	Ukiah Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	E	P	E	E	E		P	E	E		E	
114.32	Coyote Valley Hydrologic Subarea	E	P		E	E					E	E	E		E	E	E	E	P	E	E	E			E	E		E	
114.33	Forsythe Creek Hydrologic Subarea	E	P		E	E						E	E		E	E	E	P	P	E	E	E			E	E		E	
115.00	Bodega Hydrologic Unit																												
115.10	Salmon Creek Hydrologic Area	E	P		E	E		E				E	E		E	E	E		P	E	E	E		P	E			E	
115.20	Bodega Bay Hydrologic Area	E	E		E	E						E	E	E	E	E	E		P	E	E	E		E	E			E	
115.30	Estero Americano Hydrologic Area	E	P		E	E		E				E	E	E	E	E	E		P	E	E	E		P	E			E	
115.40	Estero de San Antonio Hydrologic Area	E	P		E	E		E				E	E	E	E	E	E		P	E	E	E		P	E			E	

TABLE 2-1. BENEFICIAL USES OF WATERS OF THE NORTH COAST REGION
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CalWater Number	HYDROLOGIC UNIT/HYDROLOGIC AREA/ HYDROLOGIC SUBAREA/DRAINAGE FEATURE NAME	BENEFICIAL USES																											
		AGR	AQUA	ASBS	COLD	COMM	CUL	EST	FISH	FLD	FRSH	GWR	IND	MAR	MIGR	MUN	NAV	POW	PRO	RARE	REC1	REC2	SAL	SHELL	SPWN	WARM	WET	WILD	WQE
	Minor Coastal Streams (not listed above**)	P	P		P	E	P	E			P	P	P	P	P	E	P		P	E	P	P			P	P		E	
	Ocean Waters		E	P		E						P	E	E		E		P	E	E	E		E	E			E		
	Bays		P		E	E	P	P				P	E	E		E		P	P	P	E		E	E	P		E		
	Saline Wetlands		P		P	P	P	P		P	P	P	P	P		P			P	P	P	P	P	P	P	E	P		
	Freshwater Wetlands	P	P		P	P	P	P		P	P	P	P		P	P	P			P	P	P		P	P	P	E	P	
	Estuaries	P	P		E	P	P	E			P		P	E	E	P	E	P	P	P	E	E		E	E	P		E	
	Groundwater	E	P				E						E			E			P										

** Perennial or ephemeral